

# Product data sheet

## Characteristics

### ZB5AJ5

Selector switch head, plastic, black, Ø22, long handle, 3 positions, spring return to center



#### Main

Range of product	Harmony XB5
Product or component type	Head for selector switch
Device short name	ZB5
Bezel material	Dark grey plastic
Mounting diameter	0.87 in (22 mm)
Head type	Standard
Sale per indivisible quantity	1
Shape of signaling unit head	Round
Type of operator	To centre spring return
Operator profile	Black long handle
Operator additional information	Non padlockable
Operator position information	3 positions +/- 45°

#### Complementary

CAD overall width	1.14 in (29 mm)
CAD overall height	1.50 in (38 mm)
CAD overall depth	1.81 in (46 mm)
Net Weight	0.04 lb(US) (0.017 kg)
Mechanical durability	1000000 cycles
Station name	XALD 1...5 cut-outs XALK 2...5 cut-outs
Electrical composition code	C3 6 single front mounting C4 6 single and double front mounting C5 5 single front mounting C6 5 single and double front mounting C7 4 single front mounting C8 4 single and double front mounting C11 3 single front mounting SF1 3 single front mounting SR1 3 single rear mounting
Device presentation	Basic element

#### Environment

Protective treatment	TH
Ambient air temperature for storage	-40...158 °F (-40...70 °C)
Ambient air temperature for operation	-40...158 °F (-40...70 °C)
Overvoltage category	Class II conforming to IEC 60536
IP degree of protection	IP67 conforming to IEC 60529 IP69 IEC 60529 IP69K
NEMA degree of protection	NEMA 13 NEMA 4X
Resistance to high pressure washer	7000000 Pa at 55 °C, distance : 0.1 m
IK degree of protection	IK06 conforming to IEC 50102

Standards	CSA C22.2 No 14 JIS C8201-5-1 EN/IEC 60947-1 EN/IEC 60947-5-4 UL 508 EN/IEC 60947-5-1 JIS C8201-1
Product certifications	RINA CSA DNV BV GL LROS (Lloyds register of shipping) UL Listed
Vibration resistance	5 gn (f= 2...500 Hz) conforming to IEC 60068-2-6
Shock resistance	30 gn (duration = 18 ms) for half sine wave acceleration conforming to IEC 60068-2-27 50 gn (duration = 11 ms) for half sine wave acceleration conforming to IEC 60068-2-27

### Ordering and shipping details

Category	22467 - PUSHBUTTONS,22MM(PLASTIC) NEW
Discount Schedule	CS2
GTIN	00785901386582
Nbr. of units in pkg.	1
Package weight(Lbs)	0.06 lb(US) (0.03 kg)
Returnability	Yes
Country of origin	FR

### Packing Units

Unit Type of Package 1	PCE
Package 1 Height	1.38 in (3.5 cm)
Package 1 width	2.05 in (5.2 cm)
Package 1 Length	2.13 in (5.4 cm)
Unit Type of Package 2	BB1
Number of Units in Package 2	5
Package 2 Weight	4.34 oz (123 g)
Package 2 Height	2.05 in (5.2 cm)
Package 2 width	1.38 in (3.5 cm)
Package 2 Length	10.43 in (26.5 cm)
Unit Type of Package 3	S02
Number of Units in Package 3	100
Package 3 Weight	6.20 lb(US) (2.814 kg)
Package 3 Height	5.91 in (15 cm)
Package 3 width	11.81 in (30 cm)
Package 3 Length	15.75 in (40 cm)

### Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	 <a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)  <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
RoHS exemption information	 Yes

---

China RoHS Regulation

 China RoHS Declaration

Environmental Disclosure

 Product Environmental Profile

Circularity Profile

 End Of Life Information

---

### Contractual warranty

---

Warranty

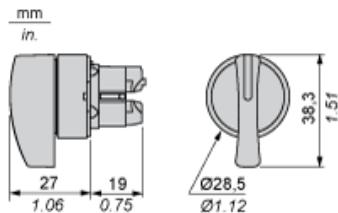
18 months

---

---

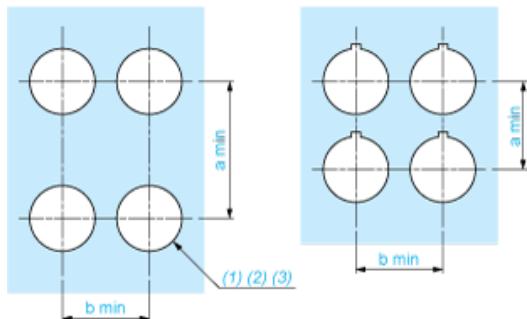
Dimensions

---



Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

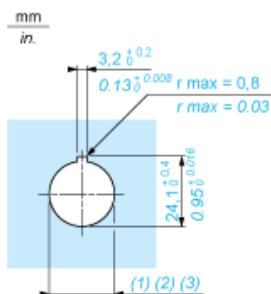
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.
- (3) Ø22.5 mm recommended ( $\varnothing 22.3 \text{ mm}^{+0.4}_{-0.0}$ ) / Ø0.89 in. recommended ( $\varnothing 0.88 \text{ in.}^{+0.016}_{-0.0}$ )

Connections	a in mm	a in in.	b in mm	b in in.
By screw clamp terminals or plug-in connector	40	1.57	30	1.18
By Faston connectors	45	1.77	32	1.26
On printed circuit board	30	1.18	30	1.18

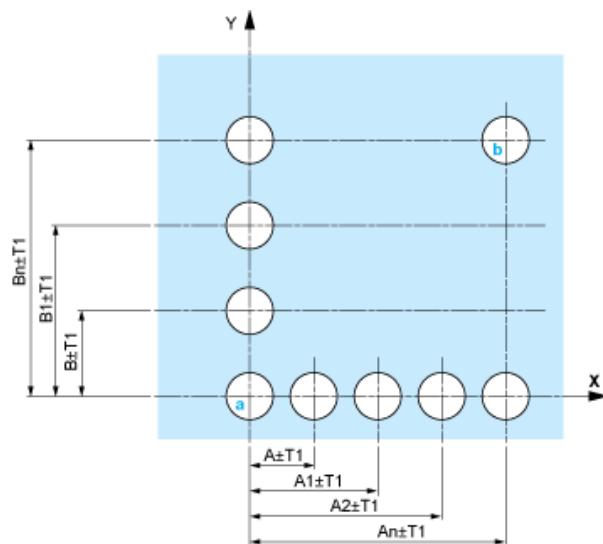
Detail of Lug Recess



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5AZ902 is recommended.
- (3) Ø22.5 mm recommended ( $\varnothing 22.3 \text{ mm}^{+0.4}_{-0.0}$ ) / Ø0.89 in. recommended ( $\varnothing 0.88 \text{ in.}^{+0.016}_{-0.0}$ )

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

## Panel Cut-outs (Viewed from Installer's Side)

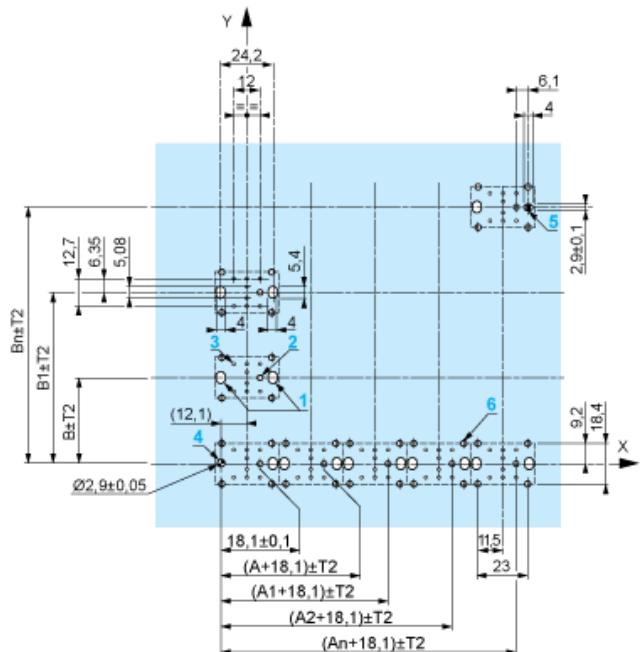


A: 30 mm min. / 1.18 in. min.

B: 40 mm min. / 1.57 in. min.

## Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)

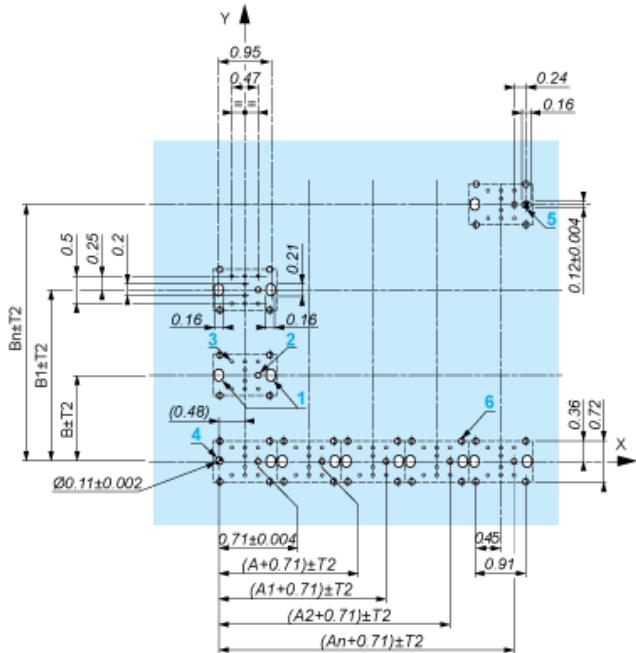
Dimensions in mm



A: 30 mm min.

B: 40 mm min.

Dimensions in in.



A: 1.18 in. min.  
 B: 1.57 in. min.

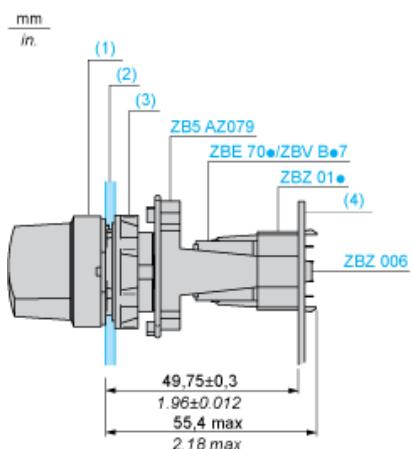
### General Tolerances of the Panel and Printed Circuit Board

The cumulative tolerance must not exceed 0.3 mm / 0.012 in.:  $T1 + T2 = 0.3$  mm max.

### Installation Precautions

- Minimum thickness of circuit board: 1.6 mm / 0.06 in.
- Cut-out diameter:  $22.4 \text{ mm} \pm 0.1$  /  $0.88 \text{ in.} \pm 0.004$
- Orientation of body/fixing collar ZB5AZ009:  $\pm 2^\circ 30'$  (excluding cut-outs marked a and b).
- Tightening torque of screws ZBZ006: 0.6 N.m (5.3 lbf.in) max.
- Allow for one ZB5AZ079 fixing collar/pillar and its fixing screws:
  - every 90 mm / 3.54 in. horizontally (X), and 120 mm / 4.72 in. vertically (Y).
  - with each selector switch head (ZB5AD•, ZB5AJ•, ZB5AG•).

The fixing centers marked a and b are diagonally opposed and must align with those marked 4 and 5.



(1) Head ZB5AD•  
 (2) Panel  
 (2) Nut  
 (4) Printed circuit board

## Mounting of Adapter (Socket) ZBZ01•

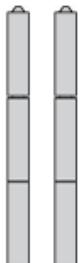
- 1 2 elongated holes for ZBZ006 screw access
- 2 1 hole Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 for centring adapter ZBZ01•
- 3 8 × Ø 1.2 mm / 0.05 in. holes
- 4 1 hole Ø 2.9 mm ± 0.05 / 0.11 in. ± 0.002, for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the printed circuit board (with cut-out marked b)
- 6 4 holes Ø 2.4 mm / 0.09 in. for clipping in adapter ZBZ01•

Dimensions An + 18.1 relate to the Ø 2.4 mm ± 0.05 / 0.09 in. ± 0.002 holes for centring adapter ZBZ01•.

---

Electrical Composition Corresponding to Code C3

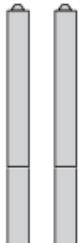
---



---

Electrical Composition Corresponding to Code C4

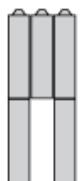
---



---

Electrical Composition Corresponding to Code C5

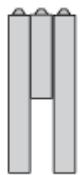
---



---

Electrical Composition Corresponding to Code C6

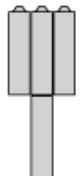
---



---

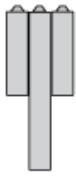
Electrical Composition Corresponding to Code C7

---



## Electrical Composition Corresponding to Code C8

---



## Electrical Composition Corresponding to Codes C9, C11, SF1 and SR1

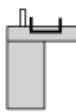
---



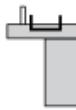
## Electrical Composition Corresponding to Code C15

---

1 N/O



1 N/C



1 N/O + N/C or 1 N/O + N/O or 1 N/C + N/C



## Legend

---

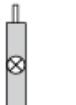
Single contact



Double contact



Light block



Possible location



## Sequence of Contacts Fitted to 3-position Selector Switch Body

### Position 315°



Push	Position	Top			
Bottom			▲		
Location		Left	Centre	Right	
State		1	1	0	
Contacts	N/O		closed	closed	open
N/C	open		open	closed	

### Position 0°



Push	Position	Top			
Bottom	▲	▲	▲		
Location		Left	Centre	Right	
State		0	0	0	
Contacts	N/O		open	open	open
N/C	closed		closed	closed	

### Position 45°



Push	Position	Top			
Bottom	▲				
Location		Left	Centre	Right	
State		0	1	1	
Contacts	N/O		open	closed	closed
N/C	closed		open	open	